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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,759	07/13/2007	Kare T. Christensen	4436-0132PUS1	9657

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EXAMINER	
ELBIN, JESSE A	

ART UNIT	PAPER NUMBER
2615	

NOTIFICATION DATE	DELIVERY MODE
09/04/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/589,759	CHRISTENSEN ET AL.	
	Examiner	Art Unit	
	JESSE A. ELBIN	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *17 August 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

a. Page 4, line 14 appears to contain a typo ("…current in **a** an electric loop").

Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 11/657,447 (US PGPub 2007/0188402) in view of Bartschi et al. (US Patent 5,734,976 ('976)) in view of Rohrseitz et al. (US PGPub 2002/0191806 ('806)) as applied to claims 1-2, 4-5 and 7 below; alternately in view of Bartschi in view of Rohrseitz in view of Niederdrank et al. (US PGPub 2008/0095387 ('387)) as applied to claims 3 and 8 below; alternately in view of Bartschi in view of Rohrseitz in view of Van Vroenhoven (WO 99/48330 ('330)) (already of record) as applied to claim 6 below.

While the claim language between the two applications is not identical, the differences were not found to patentably distinguish the claims of the two applications in view of the prior art of record. See art rejections below.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-2, 4-5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartschi et al. (US Patent 5,734,976 ('976)) in view of Rohrseitz et al. (US PGPub 2002/0191806 ('806)).

Regarding claim 1, Bartschi teaches a communication device ('976 title) which is adapted for placement in a users ear ("worn in the ear"; '976 col. 7 line 58 and Fig. 3) and comprises a shell part (housing; '976 Fig. 3 #33) enclosing an input transducer for receiving an input signal, a signal processing device (integrated circuit; '976 Fig. 3 #11)

and an output transducer (earphone; '976 Fig. 3 'H1") for providing a signal perceivable as sound ("signal is made audible by earphone H1"; '976 col. 7 lines 43-44), a battery ('976 Fig. 3 'B1') located at a surface part of the shell which is facing away from the head of the user ('976 Fig. 3 *illustrates the battery abutting a surface indicated by the hashed area between #34 and 'B1'*), a reception circuit ('976 Fig. 2 #31 'L1' 'C1' and 'C2') for reception of electromagnetic energy (magnetically operating antenna; '976 col. 7 line 5), and whereby an antenna for receiving electromagnetic energy is provided such that it has a first surface turned towards the surroundings ('976 Fig. 3 'L1' has a surface facing the top of the illustration) and a second surface located in close proximity of the battery ('976 Fig. 2 'L1' has an opposite surface near the battery 'B1').

Bartschi does not explicitly teach the antenna circuit is for transmission and reception of electromagnetic energy.

In the same field of endeavor, Rohrseitz teaches a hearing aid that is wirelessly programmable, using a transmission and reception unit to communicate with an external programming device without using wires.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the reception circuit taught by Bartschi to also transmit data for the benefit of communicating with an external programming device without using wires.

Regarding claim 2, Bartschi and Rohrseitz remain as applied above.

Neither Bartschi nor Rohrseitz explicitly teach the antenna being tuned to radiate and/or receive electromagnetic energy in the frequency range of 50 MHz to 50 GHz.

Examiner takes official notice that tuning an antenna of a transmission/reception circuit to operate in the range of 50 MHz to 50 GHz was well known at the time of the invention. The claimed range covers three orders of magnitude, including several amateur bands usable without a license. There are numerous, well known wireless communication standards that operate within this range (i.e. Bluetooth®). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a Bluetooth® transceiver in the transmission and reception unit taught by the combination of Bartschi and Rohrseitz for the benefit of wirelessly transceiving data.

Regarding claim 4, Bartschi and Rohrseitz remain as applied above.

Bartschi further teaches the antenna being embedded in material externally of the battery ('976 Fig. 3).

Regarding claim 5, Bartschi and Rohrseitz remain as applied above.

Neither Bartschi nor Rohrseitz explicitly teach the antenna being a metal part.

Examiner takes official notice that using a metal part as an antenna is well known. Very few techniques known, use non-metal parts as antennas. Metal antennas are, by far, the easiest and cheapest options available for use in hearing devices. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a metal part as an antenna in the transceiver unit taught by the combination of Bartschi and Rohrseitz.

Regarding claim 7, Bartschi and Rohrseitz remain as applied above.

Neither Bartschi nor Rohrseitz explicitly teach the antenna covering a surface area of the shell which is wider than the projection of the battery onto the faceplate surface.

Examiner takes official notice that the size of the antenna required for efficient transceiving of an electromagnetic signal is capable of being determined, with a minimal amount of experimentation, based on the requirements of the design. Use of low-frequency signals generally requires a larger antenna for efficient transmission or reception. Therefore, based on the requirements of the design, it would have been obvious to one of ordinary skill in the art at the time of the invention to create an antenna covering a surface area of the shell which is wider than the projection of the battery onto the faceplate surface.

7. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartschi et al. (US Patent 5,734,976 ('976)) in view of Rohrseitz et al. (US PGPub 2002/0191806 ('806)) as applied to claim 1 above, and further in view of Niederdrank et al. (US PGPub 2008/0095387 ('387)).

Regarding claim 3, Bartschi and Rohrseitz remain as applied above.

Neither Bartschi nor Rohrseitz explicitly teach the antenna being shaped as a part of a flexprint.

In the same field of endeavor, Niederdrank teaches forming an antenna coil within part of the circuit board within the hearing aid (‘387 Fig. 3) for the benefit of reducing the space required for the antenna.

It would have been obvious to one of ordinary skill in the art at the time of the invention to create an antenna coil as taught by the combination of Bartschi and Rohrseitz within the circuit board inside a hearing aid as taught by Niederdrank for the benefit of reducing the space required for the antenna.

While Niederdrank does not explicitly teach the circuit board being a "flexprint", use of flexible circuits within a hearing aid is well known. The volume contained within the shell of a hearing aid worn within the ear canal of a user is of variable size and shape. As such, rigid circuit boards are rarely used. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a “flexprint” circuit board as the circuit board used to create the antenna as taught by the combination of Bartschi, Rohrseitz, and Niederdrank.

Regarding claim 8, Bartschi and Rohrseitz remain as applied above.

Neither Bartschi nor Rohrseitz explicitly teach the antenna comprising a loop, which is usable also as a charging loop for a battery.

In the same field of endeavor, Niederdrank teaches the integrated hearing aid antenna (‘387 Fig. 3) is usable as a charging loop for a battery (used as a power supply; ‘387 [0037] last 4 lines) for the benefit of reducing the need to change batteries.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the charging loop into the power supply circuit as taught by Niederdrank in the hearing aid taught by the combination of Bartschi and Rohrseitz for the benefit of reducing the need to change batteries.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartschi et al. (US Patent 5,734,976 ('976)) in view of Rohrseitz et al. (US PGPub 2002/0191806 ('806)) as applied to claim 1 above, further in view of Van Vroenhoven (WO 99/48330 ('330)) (already of record).

Regarding claim 6, Bartschi and Rohrseitz remain as applied above.

Neither Bartschi nor Rohrseitz explicitly teach the antenna being manufactured by deposition of metal material on surface parts of the faceplate and/or battery drawer.

In the same field of endeavor, Van Vroenhoven teaches an electromagnetic antenna being incorporated into the battery replacement lid (Fig. 1 #7) for the benefit of incorporating the antenna into the hearing aid without using up any volume inside the hearing aid housing.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the antenna taught by the combination of Bartschi and Rohrseitz into the battery lid as taught by Van Vroenhoven for the benefit of incorporating the antenna into the hearing aid without using up any volume inside the hearing aid housing.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Maeda et al. (US PGPub 2002/0030630) teaches an antenna for portable radio communication.

b. Zink et al. (US PGPub 2003/0025478) teaches a wireless battery charging system.

c. Julstrom (US PGPub 2003/0152243) teaches a multi-coil coupling system for hearing aid applications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSE A. ELBIN whose telephone number is (571)270-3710. The examiner can normally be reached on Monday through Friday, 8:00am to 5:00pm EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Suhan Ni can be reached on (571) 272-7505. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. A. E./
Examiner, Art Unit 2615

/Suhan Ni/

Primary Examiner, Art Unit 2614